United States Patent [19]

Stipp

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[54] **DIRECT CONDENSATION OF FOOD VOLATILES ONTO A FOOD SUBSTRATE AT CRYOGENIC TEMPERATURES**

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[51] **Int. Cl.**[3] **A23F 5/24**

[52] **U.S. Cl.** **426/386;** 426/312; 426/594

[58] **Field of Search** ..... 426/594, 595, 386, 388, 426/312, 319, 453, 524; 366/106, 101; 34/57 A, 5; 62/57

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[57] **ABSTRACT**

A method for the direct condensation of gaseous food volatiles, such as coffee aroma, on a food substrate, such as coffee, at cryogenic temperatures. A bed of particulated solid substrate is placed in a vessel cooled by a cryogenic fluid such as liquid nitrogen. The substrate is fluidized to provide an adsorbent bed thereof. Gaseous aroma volatiles are then adsorbed onto the cooled and fluidized bed of substrate having a temperature preferably below −150° F. The aromatized substrate formed is preferably equilibrated to insure uniformity of aromatization, binding of volatiles to the substrate and storage stability. The resultant aromatized substrate can then be added to unaromatized food material for aroma and/or flavor enhancement.

19 Claims, No Drawings